FUJIFILM

DICOM Conformance Statement
Fuji Medical Dry Imager
DRYPIX1000/DRYPIX3000/FM-DP L

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1. Introduction

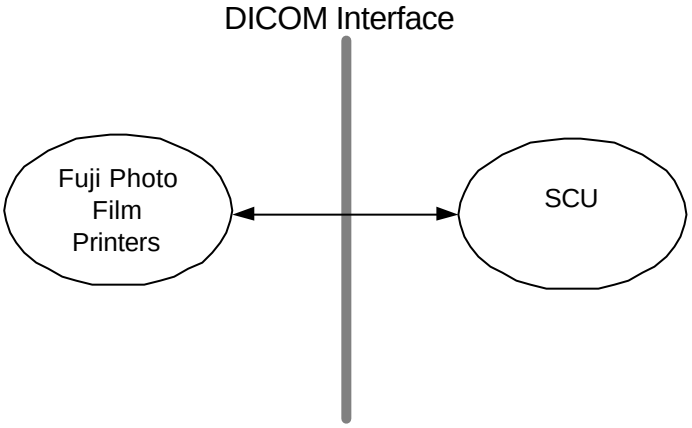
This document provides the DICOM conformance statement for the FUJI Photo Film DRYPIX product.

2. Implementation Model

The FUJI Photo Film DRYPIX is an Application Entities which provide the services of a DICOM Print Management Service Class.

2.1 Data Flow Diagram

The Fuji Photo Film DRYPIX receives images from a DICOM Print Management Service Class User, and prints them.



2.2 Functional Definitions of Application Entities

The FUJI Photo Film DRYPIX provides the DICOM Print Management Service Class support required to print images from one or more SCUs. The following functionality is supported:

- DICOM Association Management
- Management of DICOM Film Sessions, Film Boxes and Image Boxes
- Print Job Status Tracking
- Image Buffering
- Printing
- Printer Status Tracking

2.3 Sequencing of Real World Activities

Not applicable for Real World Activities.

3. Application Entity Specification

The product complies[1] with the following DICOM SOP Class requirements as an SCP.

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9
Print Job SOP Class	1.2.840.10008.5.1.1.14
Basic Annotation Box SOP Class	1.2.840.10008.5.1.1.15
Print Queue Management SOP Class (Supplement 13)	1.2.840.10008.5.1.1.26

[1] The following Correction Proposals are applied: CP16, 19, 20, 35, 49, 55, 56, 80, 81, 85, 94, 108

4. Association

4.1 Association Establishment Policies

- General
  - The SCU AE attempts to initiate a new Association for each print session.
  - Only the SCU AE shall release an Association.
  - The Association may be aborted by the SCU or the SCP.
  - The Maximum PDU Size for the PDUs offered by the SCP equals 32Kbytes.
- Number of Associations

  Maximum 4 associations at a time. Further associations will be rejected with the reason 'busy'.
- Asynchronous Nature

  Not support negotiation of multiple outstanding transactions.
- Implementation ID information

  Implementation Class UID is 1.2.392.200036.9125.5343.1

4.2 Association Initiation

This application does not initiate any DICOM associations.

4.3 Association Acceptance Policy

This application accepts an association.

- Associated Real-World Activity

  When an association is established, one of the following activities may occur.

  1) The SCU instructs the printing of a set of images. The SCP prints the set of images.
  2) The SCU requires the status of print job or the printer. The SCP will respond it.
  3) The SCU sends a verification request. The SCP will respond it.
- Proposed Presentation Contexts

  The following transfer syntax is acceptable. Table-1

Name	UID
DICOM Implicit VR Little Endian	1.2.840.10008.1.2

The following presentation contexts are acceptable.

No.	Abstract Syntax		Transfer syntax	Role	Extended Negotiation
	Name	UID			
1	Verification SOP Class	1.2.840.10008.1.1	Table-1	SCP	None
2	Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	Table-1	SCP	None
3	Print Job SOP Class	1.2.840.10008.5.1.1.14	Table-1	SCP	None
4	Printer SOP Class	1.2.840.10008.5.1.1.16	Table-1	SCP	None

5	Print Queue Management SOP Class	1.2.840.10008.5.1.1.26	Table-1	SCP	None
6	Basic Annotation Box SOP Class	1.2.840.10008.5.1.1.15	Table-1	SCP	None

SOP Classes No. 3 and 4 permit independent negotiation apart from SOP Class No. 2. The SCP resource consumption can be restrained with a higher probability than in negotiation with a combination with SOP Class No. 2. As a result, the SCP side processing speed can be increased (CP-81).

SOP Class No. 5 can be used for negotiation independently or in combination with another class.

♦ SOP Specific Conformance

- DRYPIX may return the following error codes in response to any message received.

Code	Status	Meaning
0122H	Failure	SOP class not supported
0211H	Failure	Unrecognized operation : the command is not supported for the SOP class (e.g. N_CREATE for Image Box SOP class)

- The Warning Status codes 0107H, 0116H, and B604H can be individually set up so that they will be disregarded and handled in the same manner as for Success (000H).
- The N-EVENT-REPORT message can be set up so that it will not be issued.
- The maximum number of print jobs is 64.
- When N-SET of Basic Grayscale Image BOX is used to specify the same Image Position (2020,0010) several times, the last-specified one takes effect. N-ACTION for Basic Film Session or Basic Film Box ends normally and does not cause error C604H (CP-80).
- While a Failure status prevails, "Attribute List" returns nothing.
- While a Success/Warning status prevails, N-CREATE returns all the supported attributes contained in a generated instance as the "Attribute List".
- While a Success/Warning status prevails, N-SET returns properly updated SCU-specified items as the "Attribute List". However, it does not return Basic Grayscale Image Sequence with Basic Grayscale Image Box.
- While the Status (0000,0900) = 0107H (Attribute list error), Attribute Identifier List (0000,1005) does not return.
- In some Failure/Warning statuses, Error Comment (0000,0902) returns. See Appendix D.

5. Verification SOP Class (1.2.840.10008.1.1)

The DRYPIX provides standard conformance to the DICOM Verification Service Class as an SCP. Upon receipt from an SCU of a verification of communication request, the DRYPIX will issue a confirmation.

6. Basic Film Session SOP Class (1.2.840.10008.5.1.1.1)

The following DIMSE services are supported.

- N-CREATE
- N-SET
- N-DELETE
- N-ACTION

6.1 N-CREATE

♦ Description

- N-CREATE creates a Basic Film Session SOP instance and effects initialization with a value sent from an SCU (or the default value if no such value is sent).
- The instance of this SOP needs to be created before Basic Film Box SOP instance creation.
- One Association can have only one Basic Film Session SOP instance at a time. For the use of two or more Basic Film Session SOP instances, it is necessary to delete the current one and then create the next one.

♦ Attribute information

Tag	Name	Usage	Supported	Default
2000,0010	Number of Copies	U/M	1-99	Config
2000,0020	Print Priority	U/M	HIGH, MED, LOW	LOW
2000,0030	Medium Type	U/M	CLEAR FILM, BLUE FILM	Config
2000,0040	Film Destination	U/M	PROCESSOR BIN_i	PROCESSOR
2000,0050	Film Session Label	U/U	Up to 64 characters	Null string
2000,0060	Memory Allocation	U/U	1-92160	None
2100,0160	Owner ID	U/U		None

* "BIN_i" for "2000,0040" is used to specify the sorter bin of a printer with a sorter. The letter "i" represents a bin number, which ranges from the number 1 to the number of printer bins (10 max.). If the employed printer does not have a sorter, "BIN_i" is invalid and replaced by PROCESSOR at an SCP.

* "2000,0060" is used for memory space reservation (variable in 1KB increments).

♦ Status

- If an element value is not specified, the default value is used and "Success: 0000H" returns.
- When Affected SOP Instance (0000,1000) is missing or sent at a length setting of 0, an SCP generates a UID and returns "Success: 0000H".

- If an element value is outside the acceptable range, the default value is used and "Warning: 0116H" returns.
- Even when the specified Medium Type (2000,0030) is not loaded in the output laser imager, Warning does not return. Instead, the type of the medium loaded into the laser imager is used for output[2].
- Even in a Warning status, a Basic Film Session SOP instance is created so that processing can be continuously performed.
- In a Failure status, no Basic Film Session SOP instance is created.

Code	Status	Meaning
0000H	Success	Film session successfully created. The actual values assigned to attributes are returned.
0107H	Warning	Attribute list error. One or more specified attributes are not applicable to a Basic Film Session SOP instance.
0110H	Failure	Processing failure. An attempt has been made to create the second Basic Film Session SOP instance.
0116H	Warning	Attribute Value Out of Range.
0117H	Failure	Invalid Object Instance. Returned if a given instance UID has violated the UID construction rules.
0213H	Failure	Resource Limitation. The requested allocation can temporarily not be provided.

♦ Remarks

The following attributes of Basic Film Session IOD are not open to an SCU. These attributes are set up within an SCP when a Basic Film Box SOP instance is created.

Tag	name
2000,0500	Referenced Film Box Sequence
0008,1150	>Referenced SOP Class UID
0008,1155	>Referenced SOP Instance UID

6.2 N-SET

♦ Description

- N-SET updates Basic Film Session SOP instance attributes. It can change all the attributes that can be set up by N-CREATE.

[2] More than one film is commonly loaded into the laser imager. Therefore, no judgments can be formulated unless the Film Size ID (2010,0050) is specified by Basic Film Box. Consequently, everything is handled as "Success".

♦ Status

- In a Warning status, the attributes remain unchanged. Processing can be continuously performed.
- In a Failure status, the attributes remain unchanged. Processing can be continuously performed.

Code	Status	Meaning
0000H	Success	Specified attributes of the SOP instance have been updated. The actual values assigned to attributes are returned.
0107H	Warning	Attribute list error. One or more specified attributes are not applicable to a Basic Film Session SOP instance.
0116H	Warning	Attribute Value out of Range.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
0213H	Failure	Resource Limitation. The requested allocation can temporarily not be provided.

6.3 N-DELETE

♦ Description

- N-DELETE deletes the entire information hierarchy whose root is a Basic Film Session SOP instance. It deallocates an allocated resource.

♦ Status

Code	Status	Meaning
0000H	Success	The specified SOP Instance hierarchy has been deleted.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.

6.4 N-ACTION

♦ Description

- N-ACTION copies the entire information hierarchy whose root is a Basic Film Session SOP instance, and then prints the associated film.
- N-ACTION also creates a Print Job SOP instance and returns its UID (when an agreement is reached in Association set-up).

♦ Argument

Action Type Name = PRINT, Action Type ID = 1

Tag	Attribute	Usage	Comment
2100,0500	Referenced Print Job Sequence	-/MC	If Print Job SOP Class or Print Queue Management SOP Class is negotiated.
0008,1150	>Referenced SOP Class UID	-/MC	If Print Job SOP Class is negotiated.
0008,1155	>Referenced SOP Instance UID	-/MC	If Print Job SOP Class is negotiated.
2100,0010	>Print Job ID	-/MC	If Print Queue management SOP Class is negotiated.

♦ Status

Code	Status	Meaning
0000H	Success	Films in the film session have been queued for printing.
0115H	Failure	Invalid Argument Value. Returned if the Action Type provided by the SCU is not recognized.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
B602H	Warning	Film Session SOP instance hierarchy does not contain Image Box SOP Instance. Empty page will not be printed.
C600H	Failure	Film Session SOP Instance hierarchy does not contain Film Box SOP Instances.
C601H	Failure	Unable to create Print Job SOP Instance. Print queue if full.

7. Basic Film Box (1.2.840.10008.5.1.1.2)

The following DIMSE services are supported.

- N-CREATE
- N-SET
- N-DELETE
- N-ACTION

7.1 N-CREATE

♦ Description

- N-CREATE creates a Basic Film Box SOP instance and effects initialization with a value sent from an SCU (or the default value if no such value is sent).
- Initialization is effected so as to link "2000,0500" (Referenced Film Box Sequence) of Basic Film Session SOP instance to the created Basic Film Box SOP instance.
- A required number of Basic Grayscale Image Box SOP instances are created in accordance with "2010,0010" (Image Display Format) and set up for "2010,0510" (Referenced Image Box Sequence) of Basic Film Box SOP instance. This value is returned to an SCU by Response.
- A necessary Basic Annotation Box SOP instance is created in accordance with "2010,0030" (Annotation Display Format ID) to set up "2010,0520" (Referenced Basic Annotation Box Sequence). This value is returned to an SCU by Response. If the use of a Basic Annotation Box SOP Class is not agreed upon, no Basic Annotation Box SOP instance is created[3].

[3] No matter whether this situation arises, annotation Text for which Configuration setup is completed will be recorded onto film.

♦ Attribute information

(Basic Film Box Presentation Module)

Tag	Name	Usage	Supported	Default
2010,0010	Image Display Format	M/M	See Appendix A.	
2010,0030	Annotation Display Format ID	U/U	FORMAT1	FORMAT1
2010,0040	Film Orientation	U/M	PORTRAIT LANDSCAPE	Config
2010,0050	Film Size ID	U/M	14INX17IN 14INX14IN 11INX14IN 8INX10IN	Config
2010,0060	Magnification Type	U/M	CUBIC NONE (no enlargement/ reduction)	CUBIC
2010,0080	Smoothing type	U/U	SHARP SMOOTH MEDIUM	Config
2010,0100	Border Density	U/U	BLACK WHITE 0-300	Config
2010,0110	Empty Image Density	U/U	(Not supported)	
2010,0120	Min Density	U/U	0-300	Config
2010,0130	Max Density	U/M	0-300	Config
2010,0140	Trim	U/U	YES NO	Config
2010,0150	Configuration Information	U/M	See Appendix B.	Config

(Basic Film Box Relationship Module)

Tag	Name	Usage	Supported	Default
2010,0500	Referenced Film Session Sequence	M/M		
0008,1150	>Referenced SOP Class UID	M/M		
0008,1155	>Referenced SOP instance UID	M/M		
2010,0510	Referenced Image Box Sequence	-/M		
0008,1150	>Referenced SOP Class UID	-/M		
0008,1155	>Referenced SOP instance UID	-/M		
2010,0520	Referenced Basic Annotation Box Sequence	-/MC		
0008,1150	>Referenced SOP Class UID	-/MC		
0008,1155	>Referenced SOP instance UID	-/MC		

* If "2010,0100", "2010,0120" or "2010,0130" is used to specify a low density, the result will be affected by the film's base density.

♦ Status

- If a specified attribute is not supported by DRYPIX although it is defined as a Basic Film Box SOP instance attribute, "Warning: 0170H" returns.
- When Affected SOP Instance (0000,1000) is missing or sent at a length setting of 0, an SCP generates a UID and returns "Success: 0000H".
- If an element value for "Usage SCU = U" is not specified, the default value is used and "Success: 0000H" returns.
- If an element value for "Usage SCU = U" is outside the acceptable range, the default value is used and "Warning: 0116H" returns.
- For situations where the Film Size ID (2010,0050) specifies the size of film that is not loaded in the imager, you can perform setup to return a "Failure: 0110H" response or "Success = 0000H" (alternate film size processing) response.
- If an element value for "Usage SCU = M" is not specified, "Failure: 0120H" returns. The same holds true when nothing is sent as a Data Set.
- If an element value for "Usage SCU = M" is outside the acceptable range, "Failure: 0106H" returns.
- Even in a Warning status, a Basic Film Box SOP instance is created so that processing can be continuously performed.
- In a Failure status, no Basic Film Box SOP instance is created. In this situation, Affected SOP Instance UID (0000,1000) does not return.

Code	Status	Meaning
0000H	Success	Film Box is successfully created. The actual values assigned to attributes are returned.
0106H	Failure	Invalid Attribute Value. Mandatory attribute had illegal value.
0107H	Warning	Attribute list error. One or more specified attributes are not supported by DRYPIX. One or more specified attributes are not applicable to a Basic Film Box SOP instance.
0110H	Failure	Processing failure. Returned if the number of film boxes exceeds 1.
0111H	Failure	Duplicate SOP instance. Instance UID given is already in use.
0116H	Warning	Attribute Value Out of Range.
0117H	Failure	Invalid Object Instance. Returned if a given instance UID has violated the UID construction rules.
0120H	Failure	Missing attribute. Returned if a mandatory attribute is missing.
B605H	Warning	Requested Min Density or Max Density outside of printer's operating range. The printer will use its respective minimum or maximum density value instead.

7.2 N-SET

♦ Description

- N-SET updates the attributes of the last-created Basic Film Box SOP instance.

♦ Updatable attributes

Tag	Name	Usage	Supported
2010,0060	Magnification Type	U/M	CUBIC NONE (no enlargement/reduction)
2010,0080	Smoothing type	U/U	SHARP SMOOTH MEDIUM
2010,0100	Border Density	U/U	BLACK WHITE 0-300
2010,0110	Empty Image Density	U/U	(Not supported)
2010,0120	Min Density	U/U	0-300
2010,0130	Max Density	U/M	0-300
2010,0140	Trim	U/U	YES NO
2010,0150	Configuration Information	U/M	See Appendix B.
0008,1150	>SOP Class UID	U/MC	
0008,1155	>SOP Instance UID	U/MC	

♦ Status

- If nothing is sent as a Data Set, "Failure: 0120H" returns.
- In a Warning status, the attributes remain unchanged. Processing can be continuously performed.
- In a Failure status, the attributes remain unchanged. Processing can be continuously performed.

Code	Status	Meaning
0000H	Success	Specified attributes of the SOP instance have been updated. The actual values assigned to attributes are returned.
0107H	Warning	Attribute list error. One or more specified attributes are not supported by DRYPIX. One or more specified attributes are not applicable to a Basic Film Box SOP instance.
0110H	Failure	Processing failure. The last-created instance is not specified.
0116H	Warning	Attribute Value Out of Range.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
0120H	Failure	Missing attribute. Returned if no Data Set is provided by the SCU.
B605H	Warning	Requested Min Density or Max Density outside of printer's operating range. The printer will use its respective minimum or maximum density value instead.

7.3 N-DELETE

♦ Description

- N-DELETE deletes the hierarchical level of the last-created Basic Film Box SOP instance.
- The deletion target is the portion related to "2000,0500" (Referenced Film Box Sequence) of Basic Film Session SOP instance.

♦ Status

Code	Status	Meaning
0000H	Success	The specified SOP Instance hierarchy has been deleted.
0110H	Failure	Processing failure. The last-created instance is not specified.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.

7.4 N-ACTION

♦ Description

- N-ACTION copies the entire information hierarchy whose root is the specified Basic Film Box SOP instance, and then prints the associated film.
- An SCU can continuously update or otherwise manipulate the entire information hierarchy whose root is a Basic Film Box SOP instance. This operation does not affect a printing operation invoked by N-ACTION.
- N-ACTION also creates a Print Job SOP instance and returns its UID (when an agreement is reached in Association set-up).

♦ Argument

Action Type Name = PRINT, Action Type ID = 1

Tag	Attribute	Usage	Comment
2100,0500	Referenced Print Job Sequence	-/MC	If Print Job SOP Class OR Print Queue Management SOP Class is negotiated.
0008,1150	>Referenced SOP Class UID	-/MC	If Print Job SOP Class is negotiated.
0008,1155	>Referenced SOP Instance UID	-/MC	If Print Job SOP Class is negotiated.
2100,0010	>Print Job ID	-/MC	If Print Queue management SOP Class is negotiated.

♦ Status

Code	Status	Meaning
0000H	Success	Success is normally returned.
0115H	Failure	Invalid Argument Value. Returned if the Action Type provided by the SCU is not recognized.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
B603H	Warning	Film Box SOP Instance hierarchy does not contain Image Box SOP Instances(empty page). Empty page will not be printed.
C602H	Failure	Unable to create Print Job SOP Instance. Print queue if full.

8. Basic Grayscale Image Box (1.2.840.10008.5.1.1.4)

The following DIMSE service is supported.

- N-SET

8.1 N-SET

♦ Description

- N-SET updates the attribute information about the Basic Grayscale Image Box SOP instances that belong to the last-created Film Box SOP instance.
- "2010,0060" (Magnification Type), "2010,0080" (Smoothing Type), and "2010,0150" (Configuration Information) take precedence over the values set for the Film Box SOP instance.
- Image deletion can be accomplished by sending "2020,0110" (Basic Grayscale Image Sequence) at a length setting of 0.
- When "2020,0030" (requested image size) is specified, "2010,0060" (magnification type) is unconditionally processed as CUBIC.
- When two or more images are set in the same Image position (2020,0010), the last one takes effect.

♦ Specifiable attributes

(Basic Image Box Presentation module)

Tag	name	Usage	Supported	Default
2020,0010	Image position	M/M	1-x (see Appendix A).	None
2020,0020	polarity	U/M	NORMAL REVERSE	Config
2010,0060	magnification type	U/U	CUBIC NONE (no enlargement/reduction)	Basic Film box Value
2010,0080	smoothing type	U/U	SHARP SMOOTH MEDIUM	Basic Film box Value
2010,0120	Min Density	U/U	0-300	Basic Film box Value
2010,0130	Max Density	U/U	0-300	Basic Film box Value
2010,0150	Configuration Information	U/U	See Appendix B.	Basic Film box Value
2020,0030	requested image size	U/U	See Appendix A.	None
2020,0110	Basic grayscale image sequence	M/M		
0028,0002	>samples per pixel	M/M	1	None
0028,0004	>photometric interpretation	M/M	MONOCHROME1 MONOCHROME2	None
0028,0010	>rows	M/M	1-6552	None
0028,0011	>columns	M/M	1-6552	None

0028,0034	>pixel aspect ratio	MC/M	R\C(Vertical\Horizontal) R,C=1-9999	1\1
0028,0100	>bits allocated	M/M	8, 16	None
0028,0101	>bits stored	M/M	8, 10, 12	None
0028,0102	>high bit	M/M	7, 9, 11	None
0028,0103	>pixel representation	M/M	0	None
7fe0,0010	>pixel data	M/M	(any)	None

(Basic Image Box relationship module)

Tag	name	Usage	Supported	Default
2020,0130	referenced image overlay box sequence	U/MC	(Not supported)	
0008,1150	>referenced sop class uid	MC/M	(Not supported)	
0008,1155	>referenced sop instance uid	MC/M	(Not supported)	
2050,0500	Referenced Presentation LUT Sequence	U/U	(Not supported)	
0008,1150	>SOP Class UID	U/U	(Not supported)	
0008,1155	>SOP Instance UID	U/U	(Not supported)	

- Status
  - If an element value for "Usage SCU = U" is not specified, the default value is used and "Success: 0000H" returns.
  - If an element value for "Usage SCU = U" is outside the acceptable range, the default value is used and "Warning: 0116H" returns.
  - If an element value for "Usage SCU = M" is not specified, "Failure: 0120H" returns. The same holds true when nothing is sent as a Data Set.
  - If an element value for "Usage SCU = M" is outside the acceptable range, "Failure: 0106H" returns.
  - If the data length calculated from "0028,0010" (rows), "0028,0011" (columns), or "0028,0100" (bits allocated) does not coincide with the "7fe0,0010" (pixel data) data length, "Failure: 0106H" for "7fe0,0010" (pixel data) returns.
  - In a Warning status, the attributes are updated. Processing can be continuously performed.
  - In a Failure status, the attributes remain unchanged. Processing can be continuously performed.
  - If "2020,0030" (requested image size) exceeds the maximum size determined by "2010,0010" (Image Display Format) and "2010,0050" (Film Size ID), the maximum size is used and "Warning: 0116H" returns.
  - If "0028,0010" (rows) or "0028,0011" (columns) exceeds the maximum size determined by "2010,0010" (Image Display Format), "2010,0050" (Film Size ID), and "2020,0010" (Image position) in situations where "NONE" is specified as "2010,0060" (Magnification Type), "2010,0060" (Magnification Type) is changed from "NONE" to "CUBIC", and "Warning: B604H" returns.

- "Failure: 0106H" returns if the combination of "0028,0100" (bits allocated), "0028,0101" (bits stored), and "0028,0102" (high bit) is other than indicated below:
  (bits allocated, bits stored, high bit) = (8, 8, 7), (16, 10, 9), (16, 12, 11)

Code	Status	Meaning
0000H	Success	Image instance has been updated successfully.
0106H	Failure	Invalid attribute value. Mandatory attribute has illegal value.
0107H	Warning	Attribute list error.
0110H	Failure	Processing failure. The specified Basic Grayscale Image Box SOP instance does not belong to the last-created Film Box SOP instance.
0116H	Warning	Attribute Value Out of Range.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
0120H	Failure	Missing attribute Returned if a mandatory attribute of the Data Set, provided by the SCU AE, is missing.
B604H	Warning	Image size is larger than image box size, the image has been demagnetized.
B605H	Warning	Requested Min Density or Max Density outside of printer's operating range. The printer will use its respective minimum or maximum density value instead.
C605H	Failure	Insufficient memory in printer to store images.

9. Print JOB SOP class (1.2.840.10008.5.1.1.14)

The following DIMSE services are supported.

- N-EVENT-REPORT
- N-GET

9.1 Overview

- A Print Job SOP Class instance represents a film print job that belongs to a certain film session. The job execution status can be monitored.
- A Print Job SOP Class instance is created in accordance with an N-ACTION request for Film Session SOP Class or Film Box SOP Class.
- A Print Job SOP Class instance is deleted when a print job is completed or a Failure status occurs.

9.2 N-EVENT-REPORT

♦ Description

- When a status change occurs, N-EVENT-REPORT is issued to an association SCU that has created the associated instance. → If the association is cleared, no reporting takes place.
- When the confirmation of a FAILURE or DONE report is received from an SCU after FAILURE or DONE, instance deletion occurs.

♦ Event types and attributes

Event type name	Event type ID	Attribute	Tag	Usage
PENDING	1	Print Job ID	2100,0010	U/MC
		Printer Name	2110,0030	U/U
		Film Session Label	2000,0050	U/U
		Execution Status Info	2100,0030	U/M
PRINTING	2	Print Job ID	2100,0010	U/MC
		Printer Name	2110,0030	U/U
		Film Session Label	2000,0050	U/U
		Execution Status Info	2100,0030	U/M
DONE	3	Print Job ID	2100,0010	U/MC
		Printer Name	2110,0030	U/U
		Film Session Label	2000,0050	U/U
		Execution Status Info	2100,0030	U/M
FAILURE	4	Print Job ID	2100,0010	U/MC
		Printer Name	2110,0030	U/U
		Film Session Label	2000,0050	U/U
		Execution Status Info	2100,0030	U/M

* The Print Job ID (2100,0010) returns only when Print Queue Management SOP Class is negotiated.

9.3 N-GET

♦ Description

- N-GET returns specified attribute information about an instance having a specified UID.

  It returns the entire attribute information if no Data Set is sent.

♦ Obtainable attributes

Tag	name	Usage	Supported
2100,0020	Execution Status	U/M	PENDING PRINTING DONE FAILURE
2100,0030	Execution Status Info	U/M	Execution Status is DONE NORMAL Execution Status is PRINTING NORMAL Execution Status is FAILURE UNKNOWN Execution Status is PENDING See Appendix C.
2000,0020	Print Priority	U/M	HIGH, MED, LOW
2100,0040	Creation Date	U/U	
2100,0050	Creation Time	U/U	
2110,0030	Printer Name	U/U	Up to 16 characters (set at installation)
2100,0070	Originator	U/U	

♦ Status

- If a specified attribute is not supported by DRYPIX although it is defined as a Print Job SOP instance attribute, "Warning: 0107H" returns.

Code	Status	Meaning
0000H	Success	Print Job information is returned.
0107H	Warning	Attribute list error. One or more specified attributes are not applicable to a Print Job SOP instance.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.

10. Printer SOP Class (1.2.840.10008.5.1.1.16)

The following DIMSE services are supported.

- N-EVENT-REPORT
- N-GET

10.1 Overview

- These services are used to express a printer or acquire the printer status information.
- When a printer starts, an SCP automatically creates an instance so that a "well-known SOP instance UID" is possessed. This value is "1.2.840.10008.5.1.1.17"."

10.2 N-EVENT-REPORT

♦ Description

- When a status change occurs in a printer, N-EVENT-REPORT is issued to all the SCUs that have established an Association for the use of the printer.

♦ Event types and attributes

Event type name	Event type ID	Attribute	Tag	Usage
Normal	1			
Warning	2	Printer Name	2110,0030	U/U
		Printer Status Info	2110,0020	U/M
Failure	3	Printer Name	2110,0030	U/U

10.3 N-GET

♦ Description

- N-GET returns the specified attribute information about a printer instance. It returns the entire attribute information if no Data Set is sent.

♦ Obtainable attributes

Tag	name	Usage	Supported
2110,0010	printer status	U/M	NORMAL WARNING FAILURE
2110,0020	printer status info	U/M	Printer Status is NORMAL NORMAL Printer Status is WARNING See Appendix C. Printer Status is FAILURE UNKNOWN

2110,0030	printer name	U/U	Up to 16 characters
0008,0070	manufacture	U/U	FUJI PHOTO FILM CO., LTD
0008,1090	manufacture model name	U/U	DRYPIX
0018,1000	device serial number	U/U	Not supported
0018,1020	software versions	U/U	
0018,1200	date of last calibration	U/U	Not supported
0018,1201	time of last calibration	U/U	Not supported

* "0018,1020" is in "major.minor" format. The "major" position accepts an alphabetical letter between A and Z. The "minor" position accepts a 2-digit decimal number between 00 and 99.

♦ Status

- If a specified attribute is not supported by DRYPIX although it is defined as a Printer SOP instance attribute, "Warning: 0107H" returns.

Code	Status	Meaning
0000H	Success	Printer information is returned.
0107H	Warning	Attribute list error. One or more specified attributes are not supported by DRYPIX. One or more specified attributes are not applicable to a Printer SOP instance.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.

11. Basic Annotation Box SOP Class (1.2.840.10008.5.1.1.15)

The following DIMSE service is supported.

- N-SET

11.1 N-SET

♦ Description

- N-SET updates the attribute information about a Basic Annotation Box SOP instance that belongs to the last-created Film Box SOP instance.
- When "2030,0020" (Text String) is set to a length of 0, a preselected Annotation can be deleted.
- If setup is performed two or more times for the same "2030,0010" (Annotation position), the last setup takes effect.

♦ Attribute information

(Basic Annotation Presentation Module)

Tag	name	Usage	Supported	Default
2030,0010	Annotation position	M/M	1−6[4]	None
2030,0020	Text String	U/M		NULL

♦ Status

- If an element value for "Usage SCU = U" is not specified, the default value is used and "Success: 0000H" returns.
- If an element value for "Usage SCU = M" is not specified, "Failure: 0120H" returns. The same holds true when nothing is sent as a Data Set.
- If an element value for "Usage SCU = M" is outside the acceptable range, "Failure: 0106H" returns.
- In a Failure status, the attributes remain unchanged. Processing can be continuously performed.
- If an attempt is made to set a Text String (2030,0020) that exceeds 64 characters in length, "Warning: 0116H" returns.

Code	Status	Meaning
0000H	Success	Annotation Box instance has been updated successfully.
0106H	Failure	Invalid attribute value. Mandatory attribute has illegal value.
0107H	Warning	Attribute list error.
0110H	Failure	Processing failure. The specified Basic Annotation Box SOP instance does not belong to the last-created Film Box SOP instance.

[4] There are six Annotation BOXes (1: upper left; 2: upper center; 3: upper right; 4: lower left; 5: lower center; 6: lower right). The character font is determined by defining the configuration. If the annotation is too long to print out, an excessive trailing end is cut off.

0116H	Warning	Attribute Value Out of Range.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
0120H	Failure	Missing attribute Returned if a mandatory attribute of the Data Set, provided by the SCU AE, is missing.

12. Print Queue Management SOP Class (1.2.840.10008.5.1.1.26)

The following DIMSE services are supported.

- N-EVENT-REPORT
- N-GET
- N-ACTION

12.1 Overview

- These services are used to monitor a print queue or print jobs. They also allow you to delete print jobs or change their priority order.
- A print queue is automatically created by an SCP at machine startup. This queue has a "well-known SOP instance UID" of "1.2.840.100008.5.1.1.25".

12.2 N-EVENT-REPORT

♦ Description

- This service reports a status change in the print queue. When a status change occurs, it issues N-EVENT-REPORT to all SCUs that have agreed upon Print Queue Management SOP Class.

Event type name	Event type ID	Description	Attribute	Tag	Usage
HALTED	1	Queue operation is halted	—	—	U/M
FULL	2	Queue is full	—	—	U/M
NORMAL	3	Queue is operational	—	—	U/M

12.3 N-GET

♦ Description

- This service acquires the information about all the print jobs on the print queue. It does not return the information about jobs that are deleted from the print queue due, for instance, to completion of processing.

♦ Obtainable attributes

Tag	name	Usage	Supported
2120,0010	Queue Status	U/M	NORMAL FULL HALTED
2120,0050	Print Job Description Sequence	U/MC	
2100,0010	>Print Job ID	U/MC	
2100,0020	>Execution Status	U/MC	PENDING PRINTING DONE FAILURE

2100,0030	>Execution Status Info	U/MC	Execution Status is DONE NORMAL Execution Status is PRINTING NORMAL Execution Status is FAILURE UNKNOWN Execution Status is PENDING See Appendix C.
2100,0040	>Creation Date	U/U	
2100,0050	>Creation Time	U/U	
2000,0020	>Print Priority	U/MC	HIGH MED LOW
2100,0070	>Origin AE	U/U	
2100,0140	>Destination AE	U/U	
2110,0030	>Printer Name	U/MC	Up to 16 characters (set at installation)
2000,0040	>Film Destination	U/U	Not supported
2000,0050	>Film Session Label	U/U	
2000,0030	>Medium Type	U/U	CLEAR FILM BLUE FILM
2100,0170	>Number Of Films	U/U	
2120,0070	>Referenced Print Job Sequence	U/MC	
0008,1150	>>Referenced SOP Class UID	U/MC	
0008,1155	>>Referenced SOP Instance UID	U/MC	

♦ Status

- If a specified attribute is not supported by DRYPIX although it is defined as a Print Queue Management SOP instance attribute, "Warning: 0107H" returns.

Code	Status	Meaning
0000H	Success	Print Queue information is returned.
0107H	Warning	Attribute list error. One or more specified attributes are not applicable to a Print Queue Management SOP instance.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.

12.4 N-ACTION

♦ Description

- This service changes the priority level of a specified print job or deletes a specified print job.

♦ Argument

Action type name	Action type ID	Description	Attribute	Tag	Usage
PRIORITIZE	1	Change priority of queue entry	Print Job ID	2100,0010	M/M
			Print Priority	2000,0020	M/M
			Owner ID	2100,0160	M/M
DELETE	2	Delete queue entry	Print Job ID	2100,0010	M/M
			Owner ID	2100,0160	M/M

♦ Status

Code	Status	Meaning
0000H	Success	Operation successfully completed.
0106H	Failure	Invalid Attribute Value. Returned if illegal print job id is set.
0107H	Warning	Attribute list error. One or more specified attributes are not supported by DRYPIX.
0115H	Failure	Invalid argument value. Returned if the Action type provided by the SCU is not recognized.
0119H	Failure	Class-Instance Conflict. Returned if the SOP class Instance UID is not defined for the given SOP Class.
0120H	Failure	Missing Attribute. Returned if a mandatory attribute of the Data Set, provided by the SCU AE, is missing.
C651H	Failure	Print queue is halted.
C652H	Failure	Mismatch of owner ID
C653H	Failure	Action failed because the job was in process.

13. Communication Profiles

13.1 Supported Communication Stacks

The DRYPIX provides DICOM V3.0 TCP/IP Network Communication support as defined in Part 8 of the DICOM Standard.

14. Extensions / Specializations / Privatizations

SOP Class : Basic Grayscale Image Box

- Attribute : bits stored(0028,0101)

  10 bits stored is supported. DICOM only specifies 8 and 12 for number of bits stored.
- Attribute : high bit(0028,0102)

  High bit position 9^{th} is supported. DICOM specifies 7^{th} or 11^{th} bit.
- Attribute : magnification type(2010,0060)

  This is unconditionally processed as CUBIC when Requested Image Size (2020,0030) is specified.

General

After a session is opened, a "data transfer timeout time" monitoring operation starts in accordance with the configuration setup. This time monitoring operation resets whenever a signal is received from an SCU. The session closes when a data transfer timeout occurs.

15. Configuration

- Overall DRYPIX setup
  - Host name
  - IP Address
  - Subnet Mask
  - TCP Port number used by SCP
  - AE title
  - Data transfer timeout time
  - Annotation Text & Font
- Setup for each SCU AE title (The default values are used for unregistered AEs.)
  - 0107H status validity
  - 0116H status validity
  - B604H status validity
  - N-EVENT-REPORT validity
  - Number of Copies (2000,0010)
  - Medium Type (2000,0030)
  - Film orientation (2010,0040)

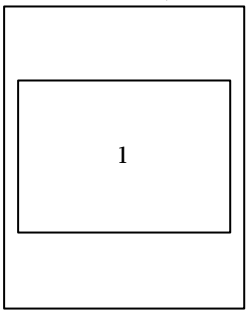
- Film Size ID (2010,0050)
- Smoothing type (2010,0080)
- Border Density (2010,0100)
- Min Density (2010,0120)
- Max Density (2010,0130)
- Trim (2010,0140)
- Configuration Information (2010,0150)
- Polarity (2020,0020)

Appendix A

• Image Display Format (2010,0010)

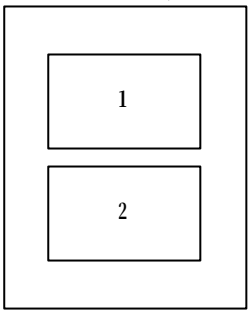
1. 14"×17" (35cm×43cm) PORTRAIT

STANDARD\1.1



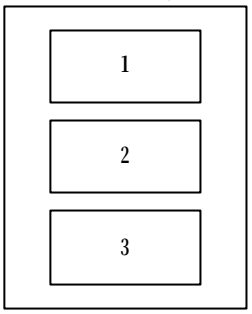
HP01

STANDARD\1.2



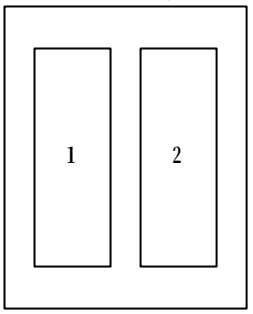
HP02

STANDARD\1.3

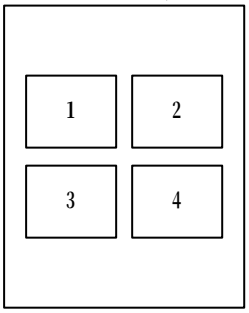


HP03

STANDARD\2.1

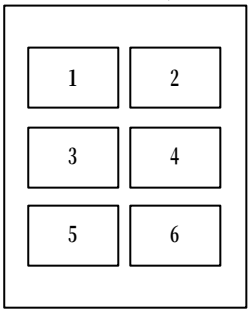


STANDARD\2.2



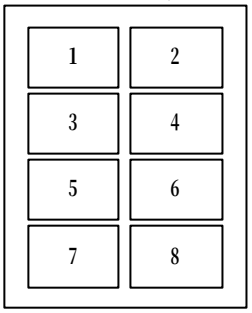
HP04

STANDARD\2.3



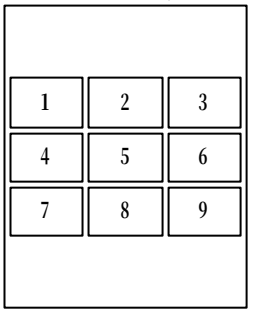
HP06

STANDARD\2.4



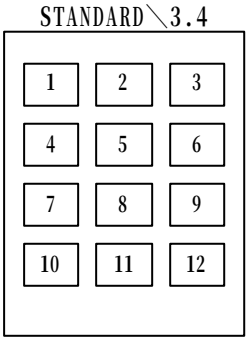
HP08

STANDARD\3.3



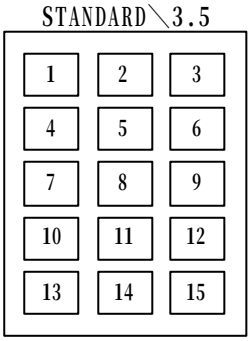
HP09

STANDARD\3.4



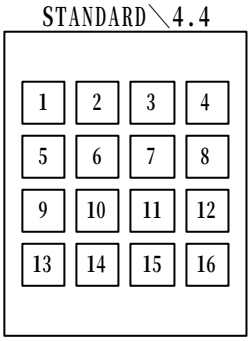
HP12

STANDARD\3.5



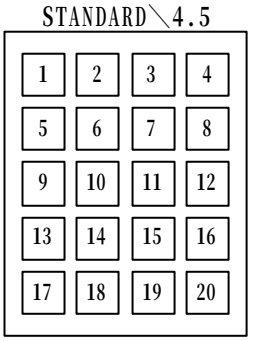
HP15

STANDARD\4.4



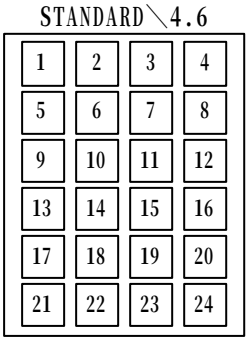
HP16

STANDARD\4.5



HP20

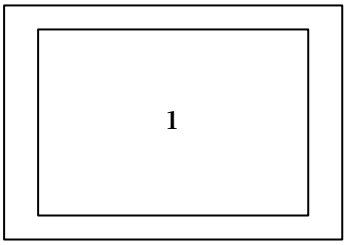
STANDARD\4.6



HP24

2. 14”×17” (35cm×43cm) LANDSCAPE

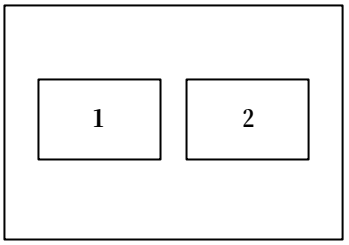
STANDARD\1.1



HL01

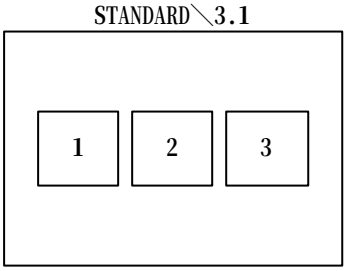
STANDARD\1.2

STANDARD\2.1



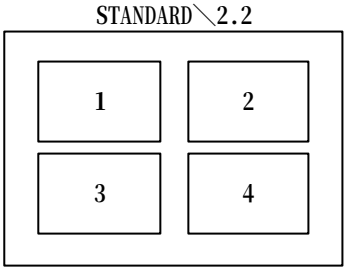
HL02

STANDARD\3.1



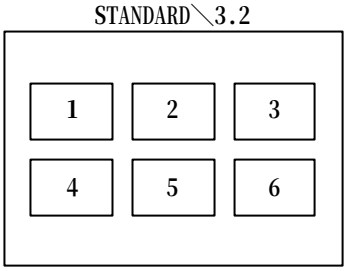
HL03

STANDARD\2.2



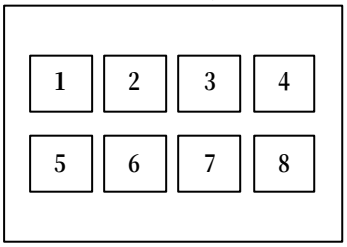
HL04

STANDARD\3.2



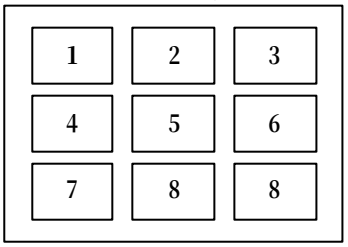
HL06

STANDARD\4.2



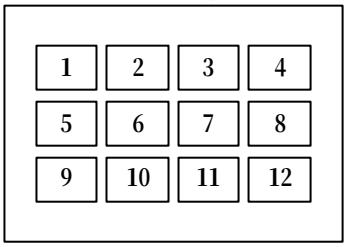
HL08

STANDARD\3.3



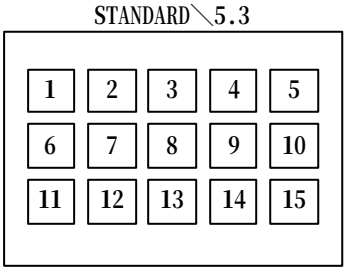
HL09

STANDARD\4.3



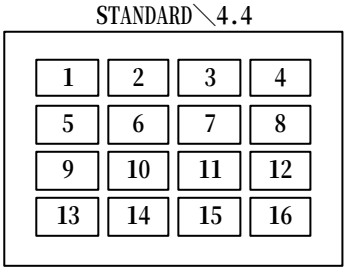
HL12

STANDARD\5.3



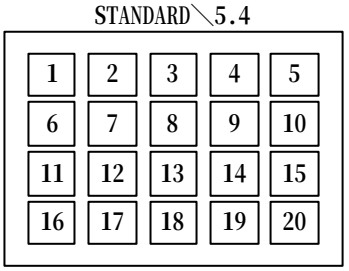
HL15

STANDARD\4.4



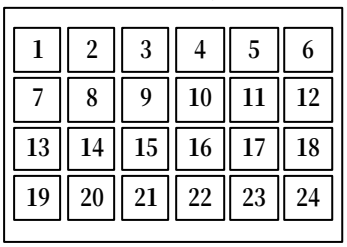
HL16

STANDARD\5.4



HL20

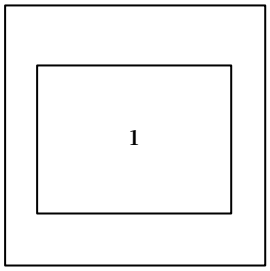
STANDARD\6.4



HL24

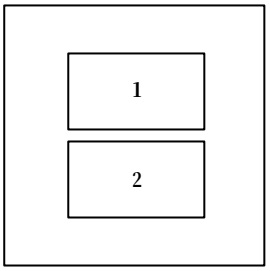
3. 14"×14" (35cm×35cm)

STANDARD\1.1



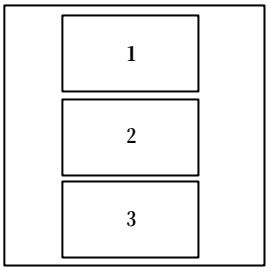
DP01

STANDARD\1.2



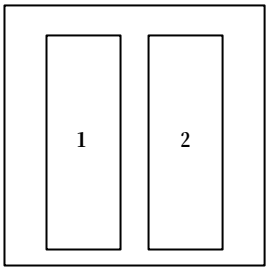
DP02

STANDARD\1.3

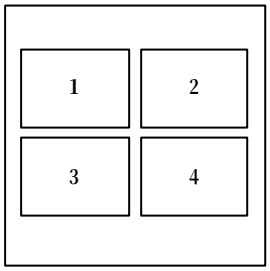


DP03

STANDARD\2.1

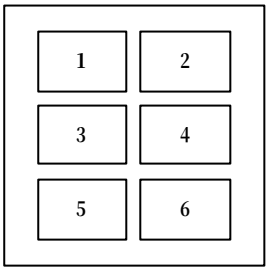


STANDARD\2.2



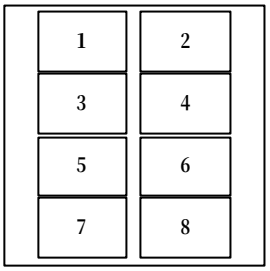
DP04

STANDARD\2.3



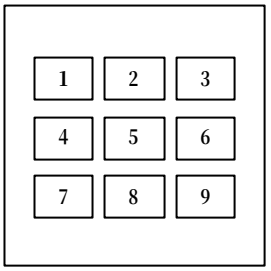
DP06

STANDARD\2.4



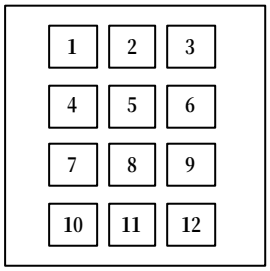
DP08

STANDARD\3.3



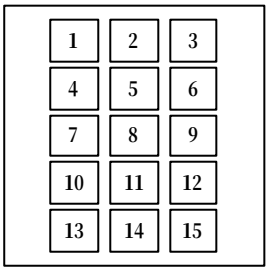
DP09

STANDARD\3.4



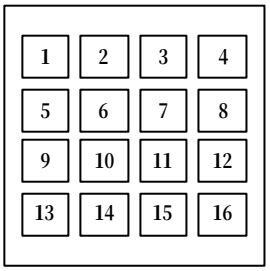
DP12

STANDARD\3.5



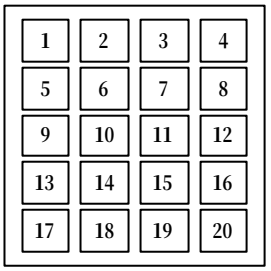
DP15

STANDARD\4.4



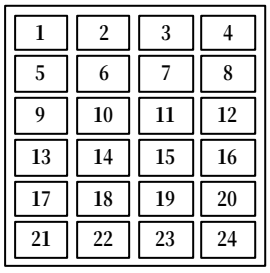
DP16

STANDARD\4.5



DP20

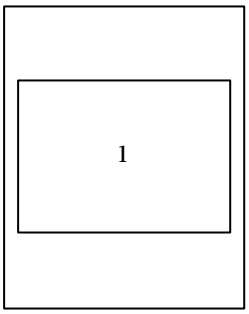
STANDARD\4.6



DP24

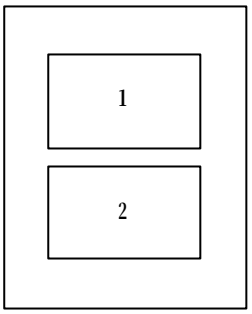
4. 11”×14” (26cm×36cm) PORTRAIT

STANDARD\1.1



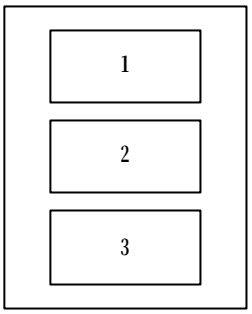
BP01

STANDARD\1.2



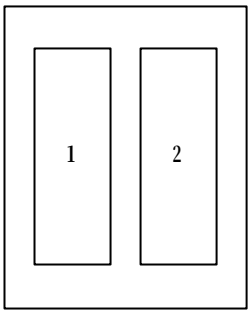
BP02

STANDARD\1.3

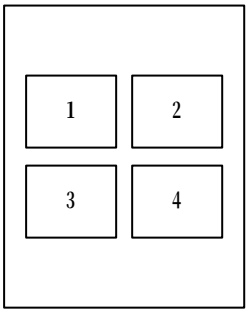


BP03

STANDARD\2.1

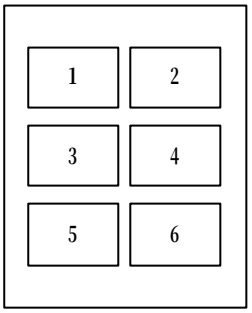


STANDARD\2.2



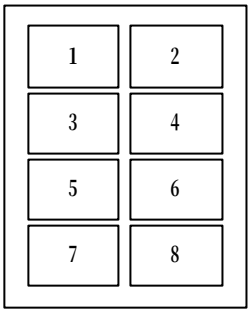
BP04

STANDARD\2.3



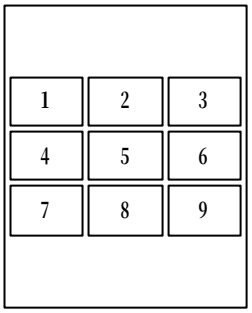
BP06

STANDARD\2.4



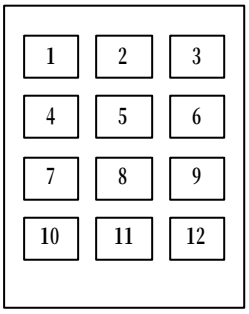
BP08

STANDARD\3.3



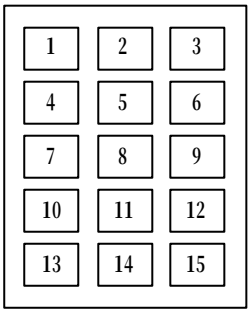
BP09

STANDARD\3.4



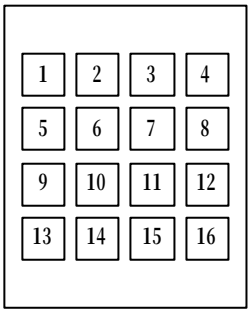
BP12

STANDARD\3.5



BP15

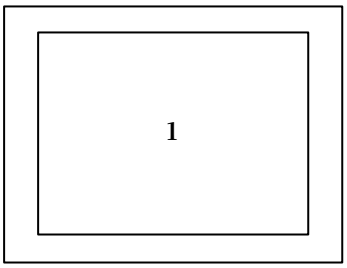
STANDARD\4.4



BP16

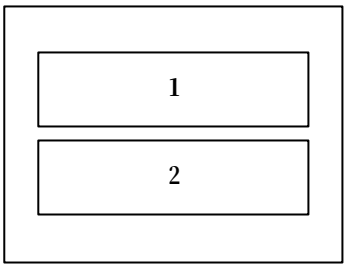
5. 11"×14" (26cm×36cm) LANDSCAPE

STANDARD\1.1

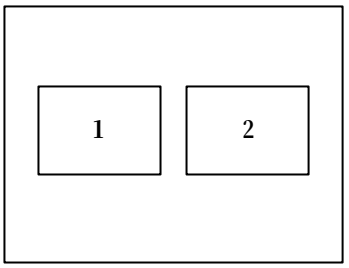


BL01

STANDARD\1.2

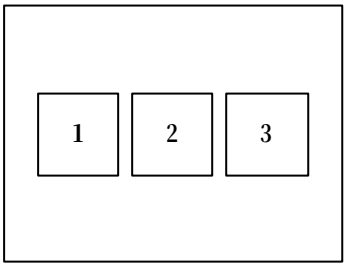


STANDARD\2.1



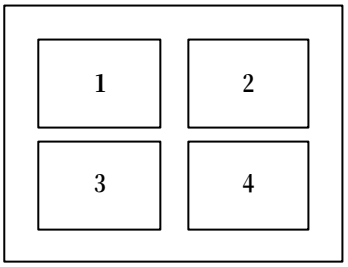
BL02

STANDARD\3.1



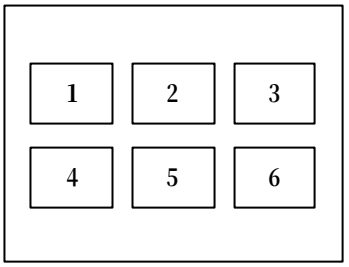
BL03

STANDARD\2.2



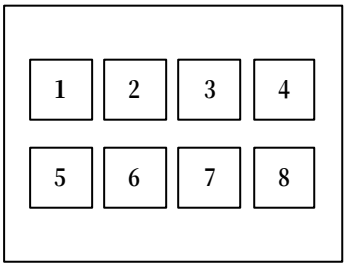
BL04

STANDARD\3.2



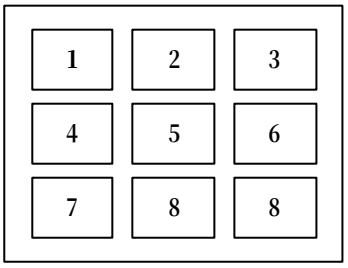
BL06

STANDARD\4.2



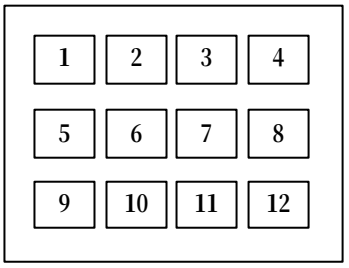
BL08

STANDARD\3.3



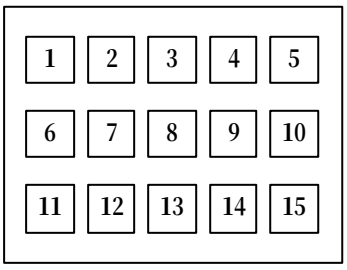
BL09

STANDARD\4.3



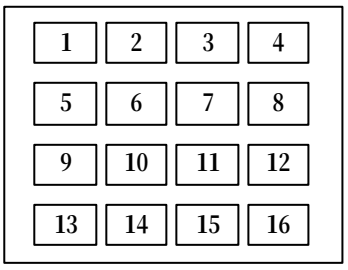
BL12

STANDARD\5.3



BL15

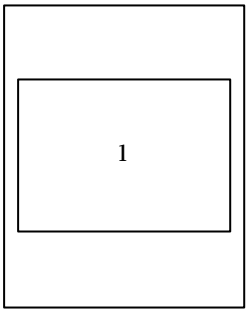
STANDARD\4.4



BL16

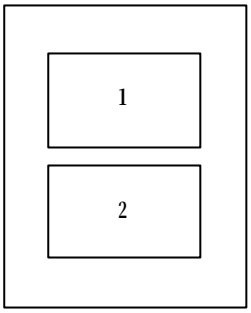
6. 8”×10” (20cm×25cm) PORTRAIT

STANDARD\1.1



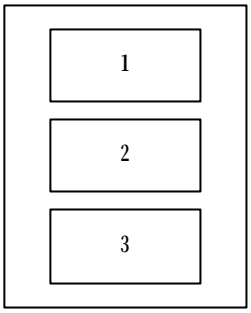
BP01

STANDARD\1.2



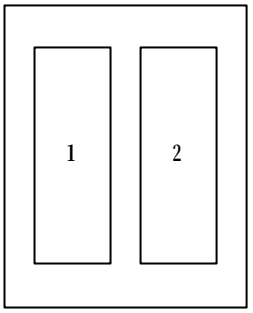
BP02

STANDARD\1.3

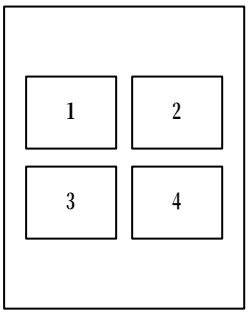


BP03

STANDARD\2.1

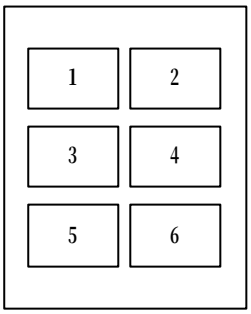


STANDARD\2.2



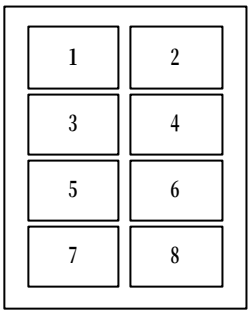
BP04

STANDARD\2.3



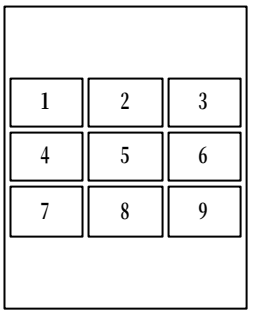
BP06

STANDARD\2.4



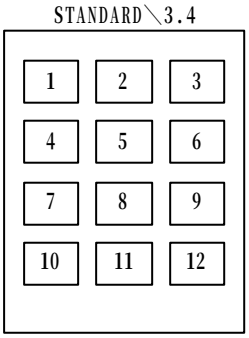
BP08

STANDARD\3.3



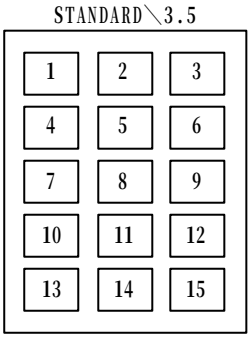
BP09

STANDARD\3.4



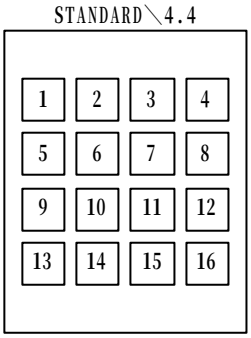
BP12

STANDARD\3.5



BP15

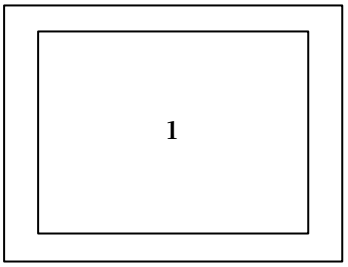
STANDARD\4.4



BP16

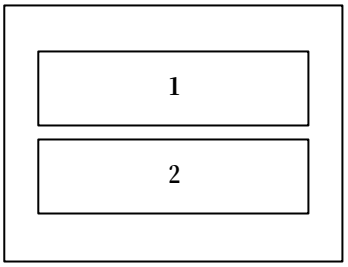
7. 8”×10” (20cm×25cm) LANDSCAPE

STANDARD\1.1

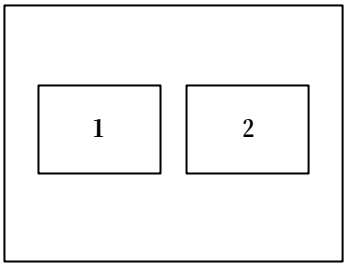


BL01

STANDARD\1.2

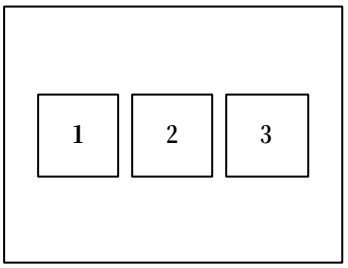


STANDARD\2.1



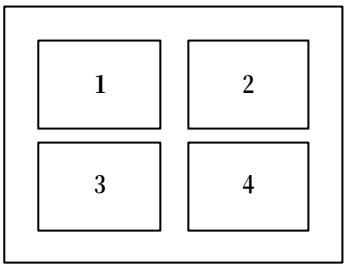
BL02

STANDARD\3.1



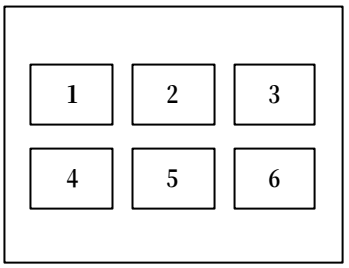
BL03

STANDARD\2.2



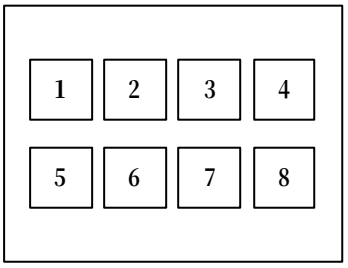
BL04

STANDARD\3.2



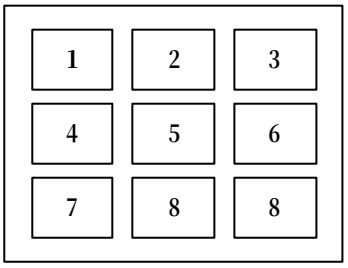
BL06

STANDARD\4.2



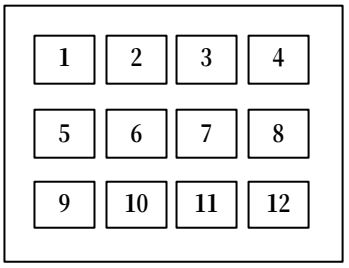
BL08

STANDARD\3.3



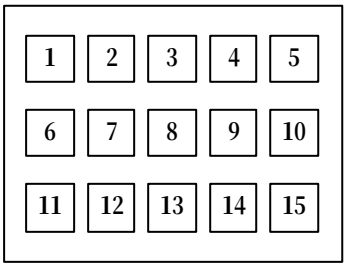
BL09

STANDARD\4.3



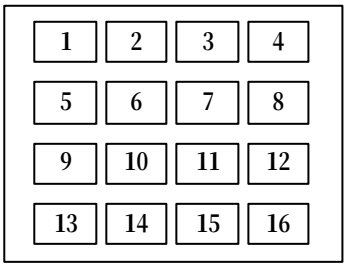
BL12

STANDARD\5.3



BL15

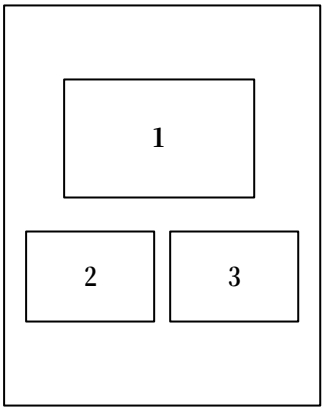
STANDARD\4.4



BL16

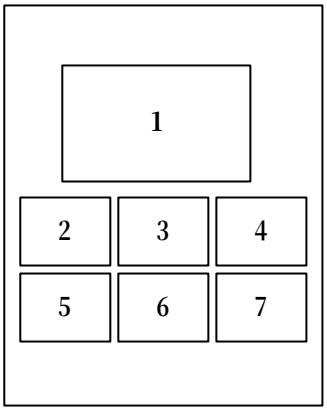
8. 14"×17" (35cm×43cm) PORTRAIT MIXED FORMAT

ROW＼1.2



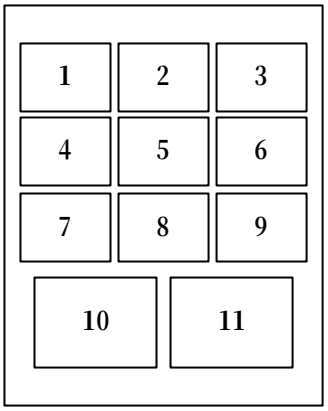
HPM1

ROW＼1.3.3



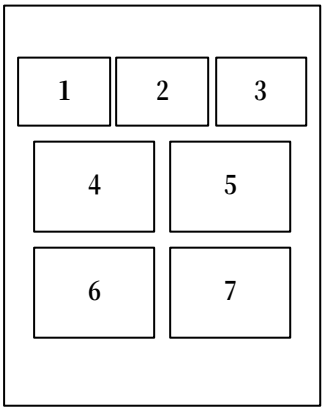
HPM2

ROW＼3.3.3.2



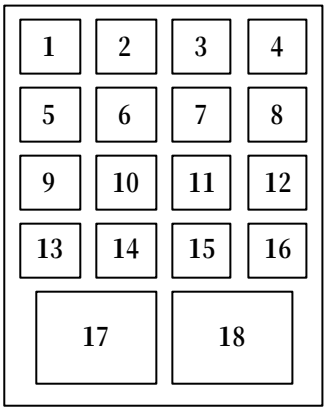
HPM4

ROW＼3.2.2



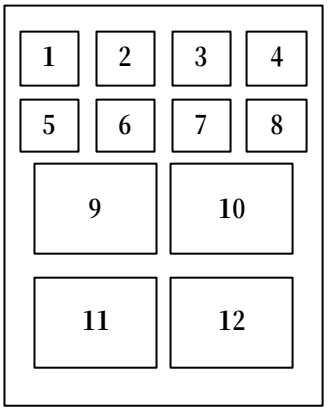
HPM5

ROW＼4.4.4.4.2



HPM6

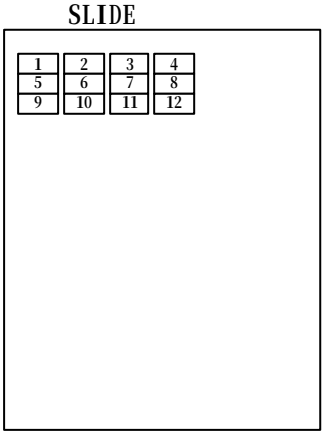
ROW＼4.4.2.2



HPM7

Portrait Slide Format

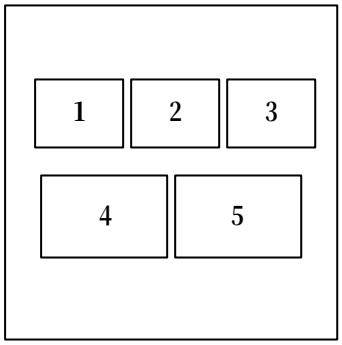
SLIDE



HPS1

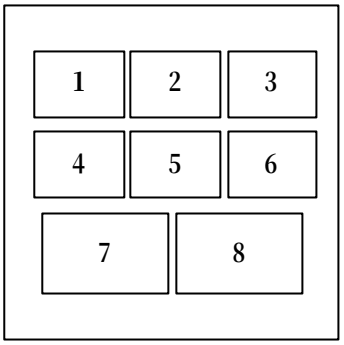
9. 14"×14" (35cm×35cm) MIXED FORMAT

ROW＼3.2



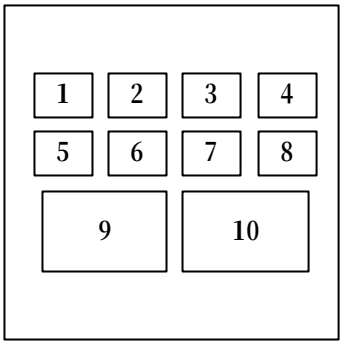
DPM1

ROW＼3.3.2



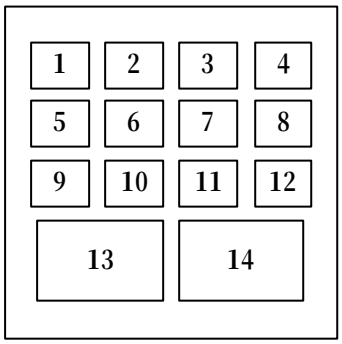
DPM2

ROW＼4.4.2



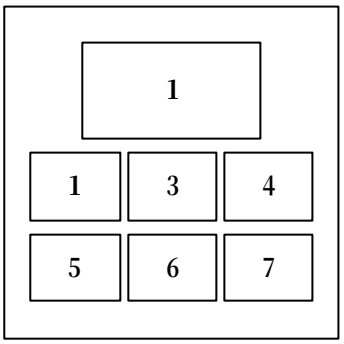
DPM3

ROW＼4.4.4.2



DPM4

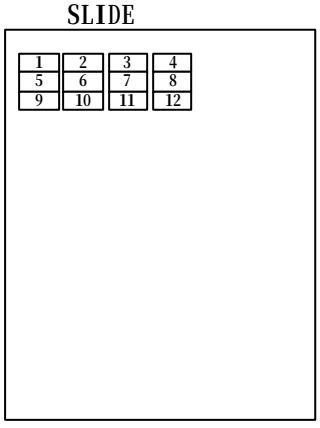
ROW＼1.3.3



DPM5

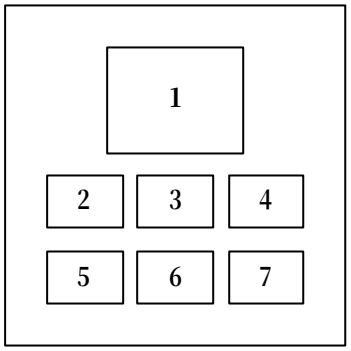
Portrait Slide Format

SLIDE



DPS1

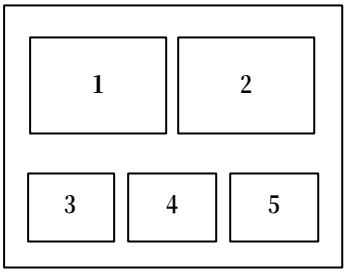
10. 11”×14” (26cm×36cm) PORTRAIT MIXED FORMAT



BPM1

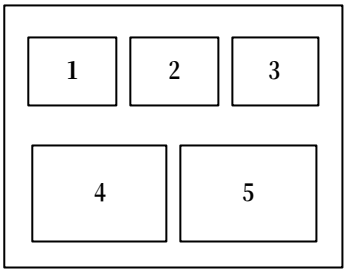
11. 11”×14” (26cm×36cm) PORTRAIT MIXED FORMAT

ROW＼2.3



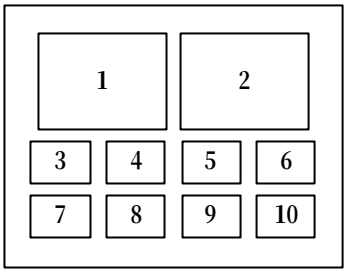
BLM1

ROW＼3.2



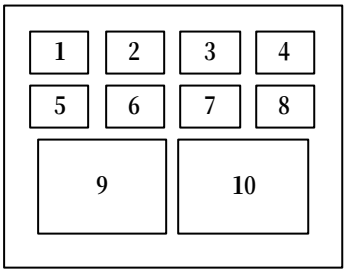
BLM2

ROW＼2.4.4



BLM3

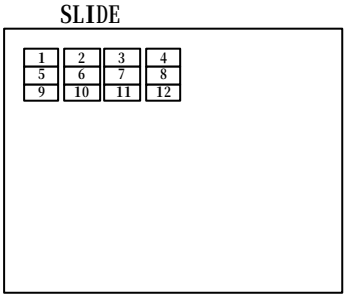
ROW＼4.4.2



BLM4

Portrait Slide Format

SLIDE



BLS1

- Image Position (2020,0010)

- Requested Image Size (2020,0030)

  The tables below show the maximum number of pixels that can be recorded without reducing the image size. Calculate the maximum value of the requested image size[1] based on values shown in the Column of those tables.

  FM-IM (1).....A value divided by 10 (the printer's image recording density is 10lines/mm)

  *Printer series names: FM-DP L, CR-DP L, FL-IM D, FL-IM II, CR-LP414N, FL-IM2636N, FL-IM3543N, FL-IM3543MN or FL-IM3535M

  FL-IM (2).....A value divided by 20 (the printer's image recording density is 20lines/mm)

  *Printer series names: FM-DP L or CR-DP L

  CR-DP.....A value divided by 12 (the printer's recording density is 300DPI)

  *Printer series names: FM-DP3543, FM-DP2636, DRYPIX1000 or DRYPIX3000

  The above values are given on the assumption that the frame width to be 0 and interval between each image data to be 20 for the configuration settings with the FN-PS551. Increasing the frame width by 1 will reduce the size by 2. If interval between each image data is changed, such a change will be reflected or assigned equally to each image data.

  Allowable values differ depending on the image data recording pitch of the printer connected to the FN-PS551.

  Note that values shown in "Column" are applicable to the X (horizontal) dimension and "Row," the Y (vertical) dimension.

[1] It used to be specified "Length in mm that Image rows of the Image are to be printed." But, it has been changed to "Width (X-dimension) in mm of the image to be printed" according to CP108. Thus, calculate it based on the values shown in Column.

♦ 14"×17" Portrait

		FL-IM		CR-DP	
Format		Column	Row	Column	Row
STANDARD\1,1		3500	4170	4072	4891
STANDARD\1,2		3500	2075	4072	2435
STANDARD\1,3		3500	1377	4072	1617
STANDARD\2,2		1740	2075	2026	2435
STANDARD\2,3		1740	1377	2026	1617
STANDARD\2,4		1740	1027	2026	1208
STANDARD\3,3		1153	1377	1344	1617
STANDARD\3,4		1153	1027	1344	1208
STANDARD\3,5		1153	818	1344	962
STANDARD\4,4		860	1027	1003	1208
STANDARD\4,5		860	818	1003	962
STANDARD\4,6		860	678	1003	798
ROW\1,2	1	3500	2076	4072	2435
	2-3	1740	2047	2026	2433
ROW\1,3,3	1	3500	2066	4072	2423
	2-7	1153	1032	1344	1212
ROW\3,3,3,2	1-9	1153	948	1344	1114
	10-11	1740	1266	2026	1485
ROW\3,2,2	1-3	1153	1204	1344	1412
	4-7	1740	1463	2026	1717
ROW\4,4,4,4,2	1-16	860	682	1003	802
	17-18	1740	1362	2026	1598
ROW\4,4,2,2	1-8	860	685	1003	805
	9-12	1740	1370	2026	1608

♦ 14"×17" Landscape

	FL-IM		CR-DP	
Format	Column	Row	Column	Row
STANDARD\1,1	4240	3442	4972	3993
STANDARD\2,1	2110	3442	2476	3993
STANDARD\3,1	1400	3442	1644	3993
STANDARD\2,2	2110	1711	2476	1986
STANDARD\3,2	1400	1711	1644	1986
STANDARD\4,2	1045	1711	1228	1986
STANDARD\3,3	1400	1134	1644	1318
STANDARD\4,3	1045	1134	1228	1318
STANDARD\5,3	832	1134	978	1318
STANDARD\4,4	1045	845	1228	983
STANDARD\5,4	832	845	978	983
STANDARD\6,4	690	845	812	983

♦ 14”×14”

Format		Column	Row
STANDARD\1,1		3500	3410
STANDARD\1,2		3500	1695
STANDARD\1,3		3500	1123
STANDARD\2,2		1740	1695
STANDARD\2,3		1740	1123
STANDARD\2,4		1740	837
STANDARD\3,3		1153	1123
STANDARD\3,4		1153	837
STANDARD\3,5		1153	666
STANDARD\4,4		860	837
STANDARD\4,5		860	666
STANDARD\4,6		860	552
ROW\3,2	1-3	1153	1412
	4-5	1740	1978
ROW\3,3,2	1-6	1153	842
	7-8	1740	1686
ROW\4,4,2	1-8	860	842
	9-10	1740	1686
ROW\4,4,4,2	1-12	860	609
	13-14	1740	1523
ROW\1,3,3	1	3500	1392
	2-7	1153	989

♦ 26×36cm Portrait

		FL-IM (1)		FL-IM (2)		CR-DP	
Format		Column	Row	Column	Row	Column	Row
STANDARD\1,1		2538	3522	5075	7043	2962	4005
STANDARD\1,2		2538	1751	5075	3511	2962	1992
STANDARD\1,3		2538	1161	5075	2334	2962	1321
STANDARD\2,2		1259	1751	2527	3511	1471	1992
STANDARD\2,3		1259	1161	2527	2334	1471	1321
STANDARD\2,4		1259	865	2527	1746	1471	986
STANDARD\3,3		833	1161	1678	2334	974	1321
STANDARD\3,4		833	865	1678	1746	974	986
STANDARD\3,5		833	688	1678	1393	974	785
STANDARD\4,4		619	865	1254	1746	725	986
ROW\1,3,3	1	2538	1722	5075	3443	2962	1958
	2-7	1259	584	1678	1780	974	1008

♦ 26×36cm Landscape

		FL-IM (1)		FL-IM (2)		CR-DP	
		Column	Row	Column	Row	Column	Row
STANDARD\1,1		3600	2460	7199	4919	4096	2871
STANDARD\2,1		1790	2460	3589	4919	2038	2871
STANDARD\3,1		1187	2460	2386	4919	1352	2871
STANDARD\2,2		1790	1220	3589	2449	2038	1425
STANDARD\3,2		1187	1220	2386	2449	1352	1425
STANDARD\4,2		885	1220	1785	2449	1009	1425
STANDARD\3,3		1187	807	2386	1626	1352	943
STANDARD\4,3		885	807	1785	1626	1009	943
STANDARD\5,3		704	807	1424	1626	803	943
STANDARD\4,4		885	600	1785	1215	1009	702
ROW\2,3	1-2	1790	1424	3589	2847	2038	1662
	3-5	1187	1016	2386	2031	1352	1190
ROW\3,2	1-3	1187	1016	2386	2031	1352	1186
	4-5	1790	1424	3589	2847	2038	1666
ROW\2,4,4	1-2	1790	1210	3589	2419	2038	1412
	3-10	885	605	1785	1219	1009	710
ROW\4,4,2	1-8	885	605	1785	1219	1009	707
	9-10	1790	1210	3589	2419	2038	1417

♦ 8"×10" Portrait

		FL-IM (1)		FL-IM (2)		CR-DP	
Format		Column	Row	Column	Row	Column	Row
STANDARD\1,1		1945	2410	3907	4819	2280	2812
STANDARD\1,2		1945	1195	3907	2399	2280	1396
STANDARD\1,3		1945	790	3907	1593	2280	924
STANDARD\2,2		967	1195	1943	2399	1130	1396
STANDARD\2,3		967	790	1943	1593	1130	924
STANDARD\2,4		967	587	1943	1190	1130	688
STANDARD\3,3		638	790	1289	1593	746	924
STANDARD\3,4		638	587	1289	1190	746	688
STANDARD\3,5		638	466	1289	948	746	546
STANDARD\4,4		473	587	962	1190	555	688
ROW\1,3,3	1	1954	1155	3907	2309	2280	1347
	2-7	638	608	1289	1225	746	711

♦ 8"×10" Landscape

		FL-IM (1)		FL-IM (2)		CR-DP	
Format		Column	Row	Column	Row	Column	Row
STANDARD\1,1		2466	1898	4931	3795	2877	2215
STANDARD\2,1		1223	1898	2455	3795	1428	2215
STANDARD\3,1		808	1898	1630	3795	945	2215
STANDARD\2,2		1223	939	2455	1887	1428	1097
STANDARD\3,2		808	939	1630	1887	945	1097
STANDARD\4,2		601	939	1218	1887	704	1097
STANDARD\3,3		808	619	1630	1251	945	725
STANDARD\4,3		601	619	1218	1251	704	725
STANDARD\5,3		477	619	970	1251	559	725
STANDARD\4,4		601	459	1218	934	704	538
ROW\2,3	1-2	1223	1082	2455	2163	1428	1263
	3-5	808	797	1630	1593	945	930
ROW\3,2	1-3	808	761	1630	1521	945	889
	4-5	1223	1118	2455	2235	1428	1305
ROW\2,4,4	1-2	1223	914	2455	1827	1428	1067
	3-10	601	472	1218	954	704	553
ROW\4,4,2	1-8	601	454	1218	918	704	532
	9-10	1223	950	2455	1899	1428	1109

Appendix B: Configuration Information (2010,0150)

Selects a gradation table in DRYPIX. Eight gradation tables can be registered for each SCU AE. A value between 1 and 8 or between CS000 and CS999 is used to specify the gradation table. When a value in the latter range is used, the relationship to the employed LUT is as indicated below:

Specified value	LUT selected
CS000－CS199	1
CS200－CS299	2
CS300－CS399	3
CS400－CS499	4
CS500－CS599	5
CS600－CS699	6
CS700－CS799	7
CS800－CS999	8

Appendix C: "2100,0030"/"2110,0020" Values

•Applicable to "2100,0030" and "2110,0020" when "2100,0020" = PENDING and "2110,0010" = WARNING.

PRINTER DOWN	The printer is not operating for an unspecified reason.
PRINTER OFFLINE	The printer has been disabled by an operator or service person.
RECEIVER FULL	The Film receive magazine is full.
SUPPLY EMPTY	The printer is out of film.

Appendix D: Error Comments

When the following status information is returned, an error comment (0000,0902) is to be set.

The maximum permissible number of characters is 64.

Code	Meaning	Error Comment (0000,0902)
0110H	An attempt was made to create the second Basic Film Session SOP instance.	Unable to handle multiple film session (BFS, N-CREATE)
0110H	An attempt was made to create more than one instance with N-CREATE of BFB.	Number of film boxes exceeds 1(BFB, N-CREATE)
0110H	The last instance created by N-SET of BFB was not specified.	Unable to handle a instance not created lastly (BFB, N-SET)
0110H	The last instance created by N-DELETE of BFB was not specified.	Unable to handle a instance not created lastly (BFB, N-DELETE)
0110H	The specified instance does not belong to the last BFB created by N-SET of BIB.	The instance doesn't belong to the last created FB(BIB, N-SET)
0110H	The film size specified by N-CREATE of BFS was not loaded.	Requested Film Size doesn't exist on printer (BFS, N-CREATE)
0122H	The specified SOP class is not supported.	SOP class not supported.
B602H	No Image Box was found when an attempt was made to execute N-ACTION of BFS.	No Image Box SOP instances (BFS, N-ACTION)
B603H	No Image Box was found when an attempt was made to execute N-ACTION of BFB.	No Image Box SOP instances (BFB, N-ACTION)
B604H	Since the image was too large to fit into a frame when N-SET of BIB was executed, it is to be reduced in size.	Image size is larger than image box, demagnified(BIB, N-SET)
B605H	The maximum or minimum permissible density was exceeded.	Requested Min Density or Max Density outside of printer's range
C600H	No Film Box was found when an attempt was made to execute N-ACTION of BFS.	No Film Box SOP instances (BFS, N-ACTION)
C601H	Job creation was not accomplished due to a full print queue when an attempt was made to execute N-ACTION of BFS.	Unable to create Print Job : Resource limitation(BFS, N-ACTION)
C602H	Job creation was not accomplished due to a full print queue when an attempt was made to execute N-ACTION of BFB.	Unable to create Print Job : Resource limitation(BFB, N-ACTION)
C605H	When an attempt was made to execute N-SET of BIB, no image storage area was found.	Unable to store image data : Resource limitation(BIB, N-SET)